

## INDUSTRIAL WASTEWATER

# WWTP for Microelectronics Manufacturing

Industry: Microelectronics  
System: 450 GPM Acid Waste Neutralization System  
Location: California  
Goals: Adjust pH from <2 to 6-9

### Project Overview:

SAMCO, in partnership with the general contractor, designed and installed a Wastewater Treatment Plant at an Analog Chip Manufacturing facility in CA utilizing pH adjustment to treat process wastewater to meet stringent discharge quality requirements. The system components and structures were designed to be phased in while eliminating stages of the existing system without affecting plant operations.

### Critical Issues:

Widely varied influent flow and composition  
Extremely tight footprint  
Install new system around existing without downtime

Stringent discharge limits  
Critical application, high uptime

### Vision for Solution:

- Build plant in sections to bring on line while current system was operating and eliminate downtime
- Multi-tank design allows for minimal impact of process upsets from affecting effluent quality
- PLC w/ Remote Telemetry for minimum onsite operator attention

### Project Scope:

Concept Development  
Detailed Plant Survey  
Process Equipment Procurement  
Process Design/Project Engineering  
Commissioning & Startup

### Equipment Description:

Equalization Tanks  
Influent Pumps  
Bulk Lime Storage & Makeup  
Mixing Tanks  
Caustic & Lime Circulation Loops  
PLC, Operator Interface/Remote Telemetry

### Special Features:

- Multi-tank gravity flow design for maximum process flexibility with minimum moving parts
- Dual alkali feed systems for peak needs or redundancy
- Pre-design and fabrication of integrated catwalk and structural support systems

